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(54) Title: ENZYME COFACTOR COMBINATION FOR SUPPLEMENTING PYRUVATE DEHYDROGENASE AND ALPHA KETOGLUTERATE DEHYDROGENASE COMPLEXES

(57) Abstract: The present invention provides a method and pharmaceutical composition for preventing or treating the development of syndromes related to dysfunctional energy metabolism, such as neuropathy, spontaneous nocturnal muscle cramps associated with neuropathy, seizing, diabetes mellitus; pediatric hypoglycemia; myopathy; muscle fatigue; muscle spasms; somnolence; reduced mental acuity; exercise intolerance and myocardial insufficiency, which are due to cofactor deficiencies associated with the pyruvate dehydrogenase complex and the alpha-ketoglutarate dehydrogenase (a-ketoglutarate dehydrogenase) complex in humans or other mammals in need thereof. In particular, a method of preventing or treating at least one syndrome related to defective glucose metabolism in humans or other mammals is provided comprised of administering a combination of enzyme cofactors containing therapeutically effective amounts of thioctic acid, niacinamide, pantothenate, riboflavin and thiamine. Also provided is a pharmaceutical composition comprised of a carrier and the combination of cofactors.